

**IN THE SPECIFICATION**

*Please amend the Specification as follows:*

**The paragraph beginning at page 1, line 19, is amended as follows:**

19           This invention is related to:  
20   U.S. Patent Application Serial No. 09/350,051 6,603,103, entitled "CIRCUIT FOR  
21           MACHINE-VISION SYSTEM" (~~Attorney Docket No. 139.040US1~~), filed  
22           ~~July 8, 1999~~,  
23   U.S. Patent Application Serial No. 09/350,050, entitled "MACHINE-VISION  
24           SYSTEM AND METHOD FOR RANDOMLY LOCATED PARTS"  
25           (~~Attorney Docket No. 139.041US1~~ now abandoned), filed July 8, 1999,  
26   U.S. Patent Application Serial No. 09/350,255, entitled "PARTS MANIPULATION  
27           AND INSPECTION SYSTEM AND METHOD" (~~Attorney Docket No.~~  
28           ~~139.042US1~~ now abandoned), filed July 8, 1999,  
29   U.S. Patent Application Serial No. 09/349,684, entitled "MACHINE-VISION

**The paragraph portion beginning at page 2, line 1, is amended as follows:**

1           SYSTEMS AND METHODS WITH UP AND DOWN LIGHTS” (~~Attorney~~  
2           ~~Docket No. 139.052US1 now abandoned~~), filed July 8, 1999,  
3   U.S. Patent Application Serial No. 09/349,948, entitled “METHOD AND  
4           APPARATUS TO CALCULATE BGA BALL TOPS” (~~Attorney Docket~~  
5           ~~No. 139.055US1 now abandoned~~), filed July 8, 1999,  
6   U.S. Patent ~~Application Serial No. 09/350,051~~ 6,522,777, entitled “COMBINED 3D- AND  
7           2D-SCANNING MACHINE-VISION SYSTEM AND METHOD”  
8           (~~Attorney Docket No. 139.056US1~~), filed July 8, 1999,  
9   U.S. Patent Application Serial No. 09/350,037, entitled “MACHINE-VISION  
10          SYSTEM AND METHOD HAVING A SINE-WAVE PROJECTION  
11          PATTERN” (~~Attorney Docket No. 139.057US1 now abandoned~~), filed July 8, 1999,  
12   U.S. Patent Application Serial No. 09/350,251, entitled “TRAY FLIPPER  
13          AND METHOD FOR PARTS INSPECTION” (~~Attorney Docket No.~~  
14          ~~139.059US1~~), filed July 8, 1999,  
15   U.S. Patent ~~Application Serial No. 09/\_\_\_\_\_,~~ 6,509,559, entitled “BINARY GRATING AND  
16          METHOD FOR GENERATING A MOIRE PATTERN FOR 3D  
17          IMAGING” (~~Attorney Docket No. 139.066US1~~), filed ~~June 20, 2000~~,  
18   U.S. Patent ~~Application Serial No. 09/\_\_\_\_\_,~~ 6,486,963, entitled “PRECISION 3D  
19          SCANNER BASE AND METHOD FOR MEASURING  
20          MANUFACTURED PARTS” (~~Attorney Docket No. 139.067US1~~), filed on  
21          ~~June 20, 2000~~,  
22   U.S. Patent ~~Application Serial No. 09/\_\_\_\_\_,~~ 6,501,554, entitled “3D SCANNER AND  
23          METHOD FOR MEASURING HEIGHTS AND ANGLES OF  
24          MANUFACTURED PARTS” (~~Attorney Docket No. 139.068US1~~), filed on  
25          ~~June 20, 2000~~,  
26   which are all assigned to a common assignee, and which are incorporated herein by  
27   reference.

**The paragraph beginning at page 11, line 18, is amended as follows:**

18           Figure 3 shows a cut-away side-view schematic of yet another  
19   embodiment of the present invention, an electronically-controlled variable-angle  
20   machine-vision illumination system 300. In some embodiments, system 300  
21   represents a detailed view of system 200 of Figure 2. Thus, in these embodiments,  
22   LCDs 310 include a plurality of concentric ring LCD areas (shown are rings 301,  
23   302, 303, 304, 305, 306, 307, and 308), each ring area driven by one of the drivers  
24   324. In the embodiment shown, selector 329 selects one or more individual drivers  
25   325, 326, 327, and/or 328. Driver 325 drives LCD ring sections 304 and 308; driver  
26   326 drives LCD ring sections 301 and 305; driver 327 drives LCD ring sections 302  
27   and 306; driver 328 drives LCD ring sections 303 and 307. In some embodiments,  
28   further concentric rings are added to each of these four sets. In other embodiments,  
29   more or fewer sets are provided, and more or fewer LCD areas are included in each  
  
1   set. Since LCD drivers 324 can drive one or more LCD sets, one or more angles  
2   selected from the four angles alpha, beta, gamma, and delta ( $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$ ) can be  
3   illuminated at one time. In embodiments that are circularly symmetric, these are  
4   conical angles to the optical axis 105. In some embodiments, LED drivers 322 drive  
5   LED light source ~~308~~ 309 in one or more banks, as described above for illumination  
6   driver 222 of Figure 2